Jeffrey Reservoir
2011 Fall Survey Summary

Jared Lorensen, Fisheries Biologist

Jeffrey Reservoir is the third canal reservoir downstream from Lake McConaughy. Water elevation is regulated by Central Nebraska Public Power & Irrigation District (CNPPID) for hydroelectric power generation. Jeffrey Reservoir offers unique fishing opportunities as a result of this functionality. Notice these aspects at http://www.cnppid.com/Assets/Maps-ShorelinePlan/PDF_Images/g-rec-jeffrey.pdf and track water fluctuations at http://www.cnppid.com/Elevation_Flows2.htm.

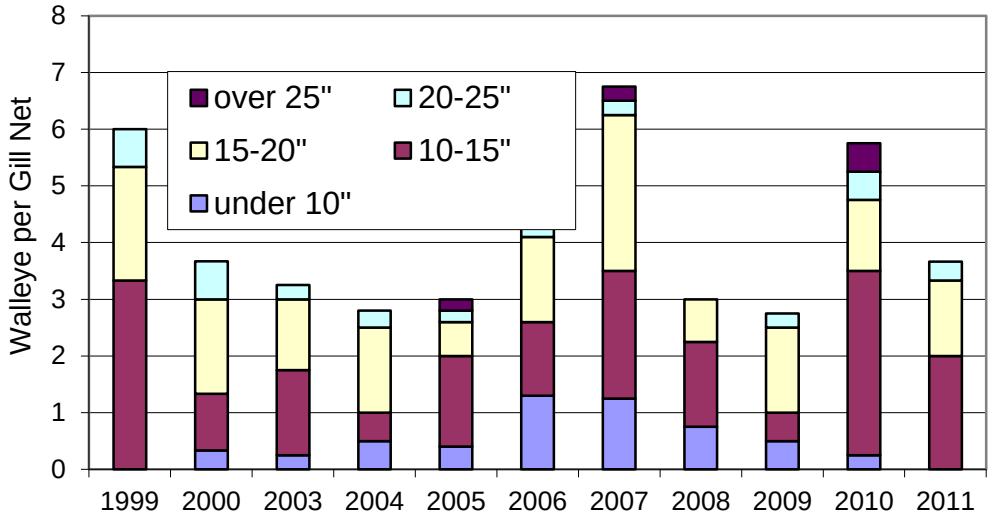
Every fall the fishery at Jeffrey Reservoir is sampled using experimental gill nets, a method commonly used to sample species found primarily in open water, such as walleye, white bass, channel catfish and hybrid striped bass. These nets are made of clear monofilament mesh strung between a weighted line and a floating line. This mesh ranges in size from ¾ of an inch to 3 inches and the nets are typically set perpendicular to the shoreline in 6 to 12 feet of depth during late afternoon with an orange floating buoy on the ends to deter boats from being entangled and for ease of retrieval. Gill nets create an invisible wall in the water column that fish cannot sense so they are entangled by their gills as they attempt to move through this mesh.

Data collected from these surveys allow biologists to evaluate the population density, size structure, and growth rates for several species. This data provides valuable information to guide decision making scenarios that include fish species stocked, stocking rates and fishing regulations. This information also assists Game and Parks staff in guiding anglers to waterbodies that have the desired populations for fishing.

Take notice of fishing regulation changes at Jeffrey Reservoir. Access the 2011-2012 fishing guide at http://outdoornebraska.ne.gov/Fishing/guides/fishguide/pdf/FishGuide.pdf or pick up a print copy at your local vendor or NGPC office.

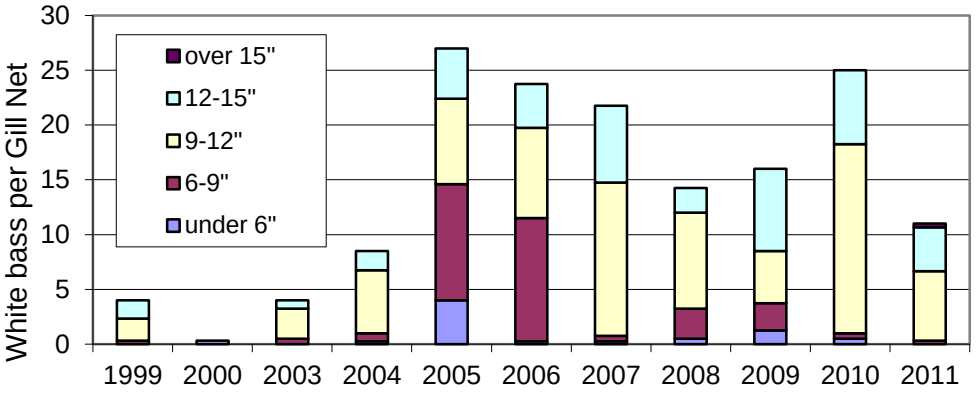
The following text and graphs are the result of the 2011 gill netting survey at Jeffrey Reservoir. Graphs represent number of each species captured per gill net by length group. For comparative purposes it also shows results from previous years.

Walleye



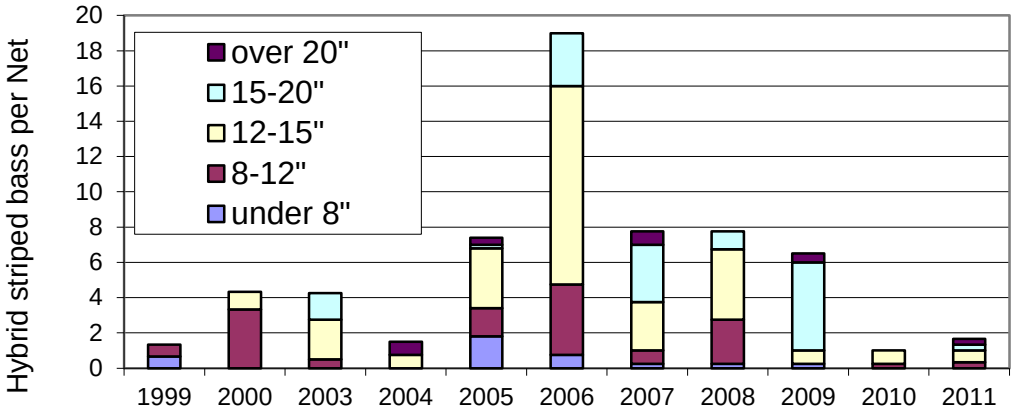
Catch rate of walleye at Jeffrey is consistently low compared to other Southwest Nebraska reservoirs. In 2011, less than four walleye per gill net were sampled with a mean length of 15 ¾" and the largest being 22 ¼". Walleye stocking is not requested for 2012 to enable stocking of other species.

White bass



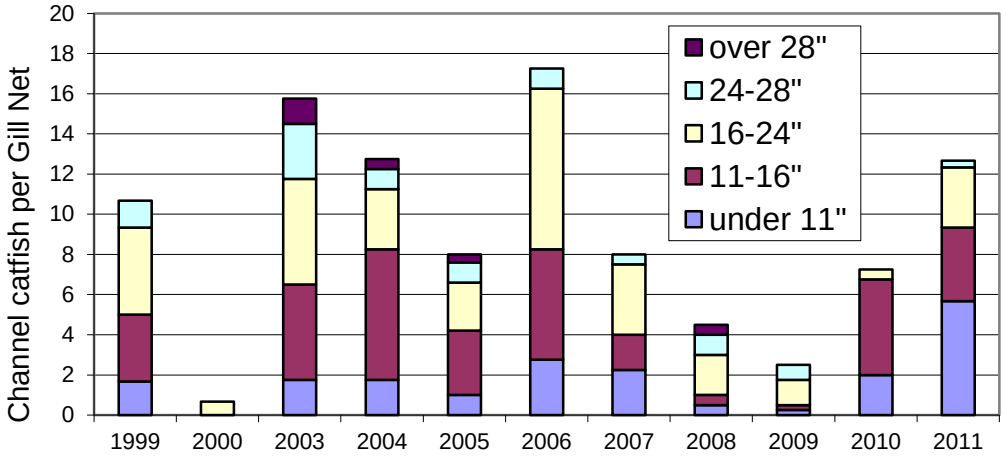
White bass are a cyclical species and the downward trend in gill net catch rate observed the last couple years returned in the 2011 data. Approximately 11 white bass were sampled per gill net with an average length of 11.4". The large amount of 9-12" white bass sampled in 2010 likely still exist and will provide continued angling success in 2012.

Hybrid striped bass



Hybrid striped bass catch rates had been consistent from 2007 to 2009 but have declined recently. The largest sampled in 2011 was 23". Jeffrey's hybrid striped bass fishery is managed to provide a low density population of large (>20") individuals. Hybrid striped bass fingerlings are requested to be stocked in 2012.

Channel catfish

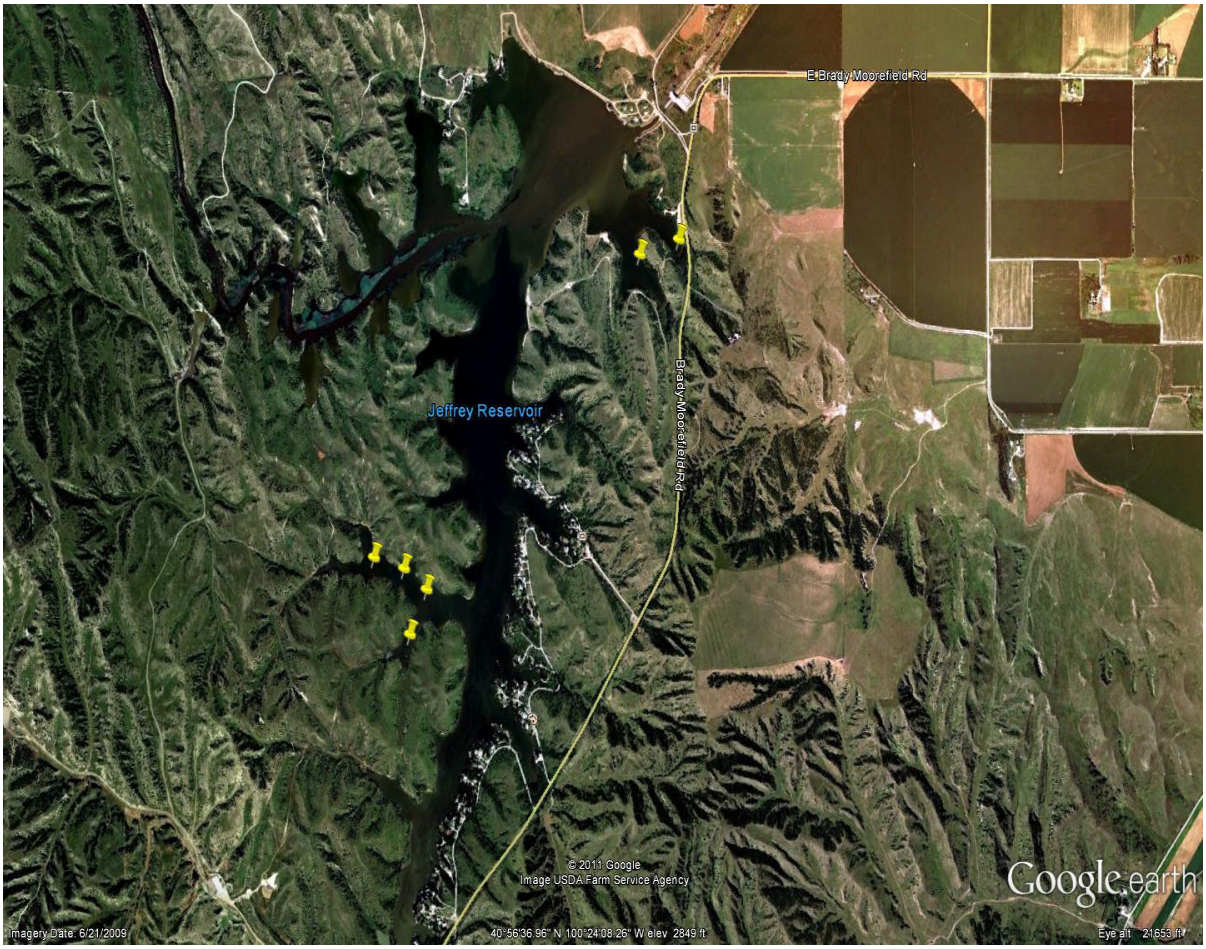


The 2011 channel catfish sample data indicates an upward trend in the population. Approximately 13 channel catfish were sampled per gill net. Catfish anglers should have success catching channel and flathead catfish in 2012.

Additional Info

To create a unique fishery, sauger stockings have begun at Jeffrey. This species is very similar to walleye and provide fantastic table fare. They are adapted to flowing water and can be identified by their compressed shape and the presence of spots on the spinous dorsal fin. Sauger are generally smaller than walleye but should provide another angling opportunity especially for canal anglers. In 2011, two sauger from the 2009 stocking were sampled and were approximately 15 1/2 “. Access this online Fish Identification Tool for sauger identification help http://outdoornebraska.ne.gov/Fishing/guides/identification/default.asp.

To congregate species such as white crappie, black crappie, largemouth bass and prey species, brush piles have been placed. On August 6, 2010 four cedar tree brush piles were placed in Jeffrey Reservoir by NGPC personnel. They are located near the WMA boat ramp (N 40.95418 / W 100.39901) and in the back of the largest west shore bay at (N 40.93616 / W 100.41567), (N 40.93686 / W 100.41508) and (N 40.93966 W 100.41743). Additional piles were placed on November 17, 2011 near the WMA boat ramp and in the next closest bay to the southwest. They are located at these GPS coordinates (40 57 15.38613 N 100 23 54.93911 W), (40 57 12.46385 N 100 23 52.56772 W), (40 57 11.28633 N 100 23 53.39832 W), (40 57 11.16588 N 100 24 3.31891 W) and (40 57 9.28943 N 100 24 0.28522 W).



If you have questions or concerns about the fishery of Jeffrey Reservoir please contact

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OR
Brad Newcomb, District Mgr. 308-865-5330, brad.newcomb@nebraska.gov

PLEASE HELP

Prevent the Spread of Aquatic Invasive Plants & Animals

Eurasian Watermilfoil

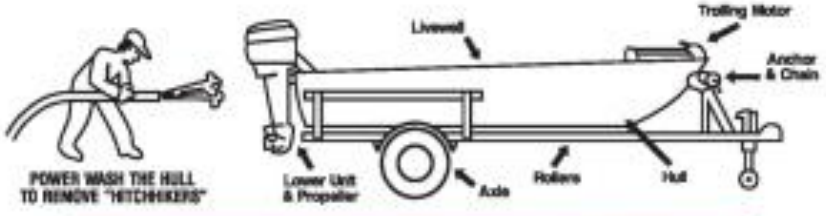
Zebra Mussel

Purple Loosestrife

BEFORE launching... and BEFORE leaving:

- Remove all aquatic plant fragments and animals (away from the water body)
- Disinfect & Drain the water in the transom, bilge and livewell
- Clean off all equipment (rods, reels, water skis, scuba gear, hunting gear, etc)
- Thoroughly clean boat & equipment with high pressure or hot water OR, if possible, dry equipment for 5 days before entering new waters
- Dispose of unwanted bait in trash

WHERE TO LOOK FOR "HITCHHIKERS"



PROTECT YOUR LAKES and RIVERS for the FUTURE

For More Information Contact:

Nebraska Invasive Species Project
http://snr.unl.edu/invasives

Nebraska Game and Parks Commission
(800) 758-2940

NEBRASKA GAME & PARKS

The Nebraska Environmental Trust